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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/671,725

09/29/2003

Ayumu Murakami

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EXAMINER

SARPONG, AKWASI

ART UNIT

PAPER NUMBER

2625

MAIL DATE

DELIVERY MODE

06/18/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/671,725	<b>Applicant(s)</b> MURAKAMI, AYUMU	
	<b>Examiner</b> AKWASI M. SARPONG	<b>Art Unit</b> 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,2,5,6,8,10 and 13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5,6,8,10 and 13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/26/2003 and 08/26/2008</u> .                               | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/13/2009 has been entered.

**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-2, 5-6, 8,10, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masuda et al (US 6628431 B1) in view of Tsunoda (US 4862218).

**Claim 1**, Masuda discloses an image reading apparatus (**reading Unit 2 shown in Fig. 2A**) comprising an original placement portion (**Original Bed-11**) on which an original is to be placed; (**Col. 1 Lines 25-30, Fig. 18A El 161, thus the original bed is**

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**used as a placement bed the original document to be scanned)** an optical unit configured to move relative to the original placement portion; **(Col. 1 Lines 25-33, thus the read unit moves relatively or along side with the flatbed scanner).**

a guide member **(guide rail-12 shown in fig. 4A)** that guides movement of the optical unit **(( Col. 6 Lines 20-30, Fig 4A, Elem. 12 thus guide rail-12 guides optical means-2 during a scanning operation).**

wherein the optical unit **(reading unit 2 shown in Fig. 2A)** includes a unit frame configured to hold an optical element, **(Col. 1 Lines 25-35 Fig. 18B El. 152 shows a reading unit which comprises of the optical unit)** and includes a screw configured to be mounted in a screw hole formed on the unit frame. **(Col. 2 lines 65-67- thus the diffusion plate and the cover frame is fixed together by a screw and therefore the unit frame is mounted with a screw and a screw hole)**

a head of the screw slides in contact with the guide member, **(Col. 2 Lines 50-67, Fig. 21, thus the head of the screw has to slide in contact with the two objects in order to hold them together).**

a position of the unit frame relative to the guide member is adjusted by rotating the screw **(Col. 2 lines 65-67- It is inherent that in order to adjust the position of the two member fixed by the screw, the screw has to be adjusted).**

the screw portion being plastically deformable and screwed into the screw hole while being plastically deformed. **(Col. 2 Lines 65-67, thus it is inherent that the**

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**screw portion of the sliding member will be plastically deformable since the screw has to hold or fixed two parts together)**

Masuda does not disclose that the position of the unit frame relative to the guide member is adjusted by the rotating the sliding member and the screw portion disclosed by Masuda does not show that the screw portion has a plurality of projecting portion along a circumference thereof and the projecting portions are provided in an area other than a tip end area of the screw portion.

Tsunoda discloses that the position of the unit frame relative to the guide member is adjusted by the rotating the sliding member. **(Col. 2 Lines 50-56 and also Col. 6 Lines 25-35, Fig. 11(A-B) and 12, thus by rotating Element 111b the optical means is adjusted by moving upwards or downwards depending on the direction of the knob)** and at least said projecting portions of the screw portion has a plurality of projecting portion along a circumference thereof and the projecting portions are provided in an area other than a tip end area of the screw portion. **(Fig. 12, El. 119- thus the screw labeled 119 clearly shows a projecting portion that gets into Elements 111b, 110b and 114c and that part becomes plastically deformable because when the screw is turned to screw into the elements that is needs to fastened.)** Therefore it will be obvious to one ordinary skilled in the art at the time the invention was made to modify Masuda's optical unit in the flatbed scanner to include Tsunoda's knob used to adjust the level or position of the optical unit so that there will be stability for the gap between the sliding members around the shaft as disclosed by Tsunoda in Col. 6 Lines 40-50.

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**(NB: The projecting part of the screw is the part that is screwed into the objects that the screw is supposed to hold or fasten together. Fig. 10, El. 119 shows screw 119 and the portion that holds or fastens El. 110e and 114a together is the projecting portions of the screw- thus the not smooth portion of the screw).**

**Claim 2**, Masuda in view of Tsunoda further discloses wherein play between the screw portion and the screw hole portion is substantially eliminated by plastic deformation of said screw portion. **(Masuda: Column 6 Lines 28-31 and Col. 2 Lines 65-67, and Lines 41-53, Fig 4, Element 24 thus the gap or space is inherently eliminated as the screw is holding or fixing the two pieces together )**

**Claim 3**, -Cancelled

**Claim 4**- Cancelled

**Claim 5**, Masuda **(Masuda: Column 6, Lines 22-29)** in view of Tsunoda further discloses wherein the tip end of the screw has an engagement portion to which a rotating tool is to engage. **(Tsunoda: Column 10, Lines 4-7 Fig.12 Element 119 shows clearly the portion where the rotating tool can be engaged to rotate)**

**Claim 6**, Masuda in view of Tsunoda discloses wherein the screw is made of a resin material. **(Masuda: Column 6, Lines 31-33,)**

**Claim 7, - (Cancelled)**

**Claim 8**, Masuda in view of Tsunoda (**Column 8, Lines 27-31, Fig 7 Elements 62a, 62b, 65a, 65b**) further discloses wherein a plurality of screws that are provided at respective end portions of said optical unit with respect to a direction orthogonal to a moving direction of the optical member respectively. (**Masuda: Column 2, Lines 51-59- Fig. 4A shows clearly that the sliding members 21 and 22b and the optical unit 2 move in respect to an orthogonal direction**)

**Claim 9, - (Cancelled)**

**Claim 10**, Masuda (Col. 3 Lines 45-60, Fig. 23) in view of Tsunoda discloses an illuminating unit (**the optical unit 369 shown in Fig. 23**) configured to illuminate the original on the original placement portion, wherein the optical element (**Masuda: Fig. 23 El. 369**) has a mirror (**Masuda: Fig. 23 El. 366**) configured to reflect a reflection light from the original that is illuminated with the illuminating unit (**Masuda: Fig. 23 El. 369**).

**Claim 11, -Cancelled**

**Claim 12, -(Cancelled).**

**Claim 13**, Masuda discloses an image reading apparatus (**reading Unit 2 shown in Fig. 2A**) comprising:

an original illumination member; (**Fig. 23 El. 369**)

a reflection system configured to reflect light from the original (**Col. 1 Lines 29-30, Fig 18, El. or reflecting mirror 176- thus the reflecting mirror reflects the lights from the original to the optical unit**) ;

a scanning member (**Fig. 18, El. 152 or read unit 152**) configured to move the reflection system; a scanning surface configured to be scanned by the scanning member; (**Col. 1 lines 33-40, thus the read unit 152 moves along the scanning direction as it reads the original document**)

and

a plurality of screws (**Col. 2 line 67- thus the two members are hold together by Screws and therefore they are more than two**) configured to be mounted in a plurality of screw holes (**it is inherent that a plurality of screws will go with a plurality of holes**) formed on the scanning member, wherein a head of each of the screws slides in contact with scanning surface; (**Col. 2 Lines 60-67-thus it is inherent that if a plurality of screws are used the sliding member hold scanning members in contact with the scanning surface**).

each of the screws has a plurality of plastically deformable projecting portions on a root of a thread thereof along a circumference of the thread (**Col. 2 Lines 60-67- thus the sliding member or the contact member can be a screw, for example the diffusion plate 255 is fixed on the cover frame 256 by a screw**).



said scanning member has a screw hole in which said screw portion of said sliding member is mounted **(Col. 2 Lines 65-67- thus the diffusion plate 255 and the cover frame 256 has to have a hole in them in order to use the screw to fastened them).**

Masuda does not disclose that the screw portion has a plurality of projecting portions along a circumference thereof, and the projecting portions are provided in an area other than a tip end area of the screw portion, and at least said projecting portions of the screw portion are plastically deformable, and said projecting portions and said screw hole engage each other in an interference fit in the axial direction of the screw portion.

Tsunoda discloses that the screw portion has a plurality of projecting portions along a circumference thereof, **(Fig. 10 El. 119 shows the projecting portion)** and the projecting portions are provided in an area other than a tip end area of the screw portion, and at least said projecting portions of the screw portion are plastically deformable, **(Fig. 12, El. 119- thus the screw labeled 119 clearly shows a projecting portion that gets into Elements 111b, 110b and 114c and that part becomes plastically deformable because when the screw is turned to screw into the elements that is needs to fastened.)** and said projecting portions and said screw hole engage each other in an interference fit in the axial direction of the screw portion. **(NB: The projecting part of the screw is the part that is screwed into the objects that the screw is supposed to hold or fasten together. Fig. 10, El. 119 shows**

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**screw 119 and the portion that holds or fastens El. 110e and 114a together is the projecting portions of the screw- thus the not smooth portion of the screw).**

Therefore it will be obvious to one ordinary skilled in the art at the time the invention was made to modify Masuda's optical unit in the flatbed scanner to include Tsunoda's knob used to adjust the level or position of the optical unit so that there will be stability for the gap between the sliding members around the shaft as disclosed by Tsunoda in Col. 6 Lines 40-50.

#### **Response to applicant's Remark**

The remarks filed by the applicant on 03/31/2009 has been considered but was not persuasive.

Regarding Amended claim 1 applicant argues that the cited reference does not discloses that the head of the screw 119 does not slide in contact the slider 115. In addition, if the screw 119 is rotated, the relative position of the base plate 114 and the slider 115 cannot be adjusted, and, a root of the thread of screw 119 does not have a plurality of projecting portions which are plastically deformable.

**In reply**, Examiner respectfully disagrees because Tsunoda discloses clearly disclose the head of the screw 119 does not slide in contact the slider 115. **(Col. 2 lines 66-67- thus it is inherent that the head of the screw has to contact both of the members that is being held together )** In addition, if the screw 119 is rotated, the relative position of the base plate 114 and the slider 115 cannot be adjusted, **(it is**

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**inherent that since the screw is holding the plate 255 and 256 together the two plates will be adjusted when the screw is rotated)** and a root of the thread of screw 119 does not have a plurality of projecting portions which are plastically deformable. **(Col. 2 lines 65 -67 states clearly that plate 255 and 256 are hold together by SCREWS and therefore they are plurality of screws and also it is inherent that for the screw to fix two things together it has to plastically deform the plates).**

### ***Conclusion***

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, King Poon can be reached on 571-272-7440. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/King Y. Poon/

Supervisory Patent Examiner, Art Unit 2625